

### **Product and Technology Development by BIRAC**

The Biotechnology Industry Research Assistance Council (BIRAC), the public sector enterprise of Department of Biotechnology (DBT) is technology portal which is exclusively involved in development of indigenous technologies, products and services in biotechnology sector. The window also provides area wise detailed about innovations, inventors, stage of technology maturation with their technology readiness levels. The portal is involved in displaying the products and technologies which are affordable and commercialized under BIRAC schemes. The window also provides opportunities for innovators and technologists involved in early stage products and technologies developments with other experts of the domain. The BIRAC provides guidance for value addition, technology licensing, validation, investment opportunities, etc to technologists and innovators.

Some of the important commercialized technologies already in market under BIRAC schemes are discussed in detail.

**Product & technology in the market:** Some of the important BIRAC supported technologies which are already in market include

- a. CytoScan:** An automated and compact whole slide scanner invented by Optra Systems Pvt. Ltd., is a holistic digital pathology solution for pathological research and diagnostics needs enabling scanning of cytology smears to provide automated imaging for cervical cancer screening.
- b. SOHUM:** Sohumi provides innovative features which includes unique algorithm to increase sensitivity and specificity, automated results, reconfirmation of results with experts through a telemedicine model and a unique business model to help doctor establish the newborn hearing screening practice. It was developed by Sohumi Innovation labs India Private Limited and is recommended as the test of choice by the American Association of Pediatrics US and the National Health Services NHS-UK, in an innovative way with an easy-to-use interface to meet the needs of the system.

- c. **NOXENO:** A nasal device developed by Innacel Technologies Private Limited and used for nasal foreign body removal.
- d. **VIBRIOSHIELD:** It was developed by Aristogene Biosciences Pvt Ltd and is used for bacteriophage based control of *Vibrio harveyi* infection in shrimp.
- e. **CHIRONEYE:** The CHIRONEYE is a medical device developed by Advenio Tecnosys Pvt. Ltd. and is used for detection of retinal abnormalities. It can mark clinical features, providing explanations towards the final diagnosis of all major retinal diseases.
- f. **Glucuronides and their Deuterium Labelled Analogs:** With the help of this newly developed technology, the company is synthesizing drug glucuronides and their deuterium labelled analog and supplying to all the major pharma companies.
- g. **EXOCAN:** The exoenrichm-high performance exosome isolation kit is used for exosome isolation from biofluids cell culture, serum, saliva, urine etc. It was developed by Exocan Healthcare Technologies Private Limited.
- h. **Genomix Malaria Pf/Pv Antigen Rapid Detection Test Kit:** The Kit is a lateral flow assay based qualitative determination of Malaria *Plasmodium falciparum* specific histidine rich protein-2 Pf HRP-2 and malaria *Plasmodium vivax* specific lactate dehydrogenase pLDH proteins in human whole blood specimens. These kits have been validated by WHO/FIND/CDC.

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